

# ES410V

## 1. General Description

ES410V is a 4G (Cat.M & NB2) GPS Tracker for vehicle. It reports location information via TCP/UDP with configurable intervals. ES410V has max 4 inputs for various types of sensors, max 4 outputs, and UART (or RS232C) for communicating with other complicated sensors. It also can read vehicle information such as VIN, RPM, odometer, fuel level, engine oil and coolant temperatures etc.



## 2. Main Functions

- **Tracking:** Send GPS information to server with configurable report interval
- **Power Saving Mode:** Device enters sleep mode when vehicle engine is OFF
- **Digital Inputs:** Ignition detection, door on/off detection, flow meter
- **Digital Outputs:** Buzzer, relay, enable/disable engine starter
- **Analog Input:** Temperature sensor, fuel level, TDS meter, breathalyzer
- **Uarts:** Camera, RFID reader, iButton, temperature/humidity sensor, driver license
- **Canbus:** Read VIN, RPM and many other standard vehicle parameters
- **Engine on/off Detection:** Detect engine on/off via ignition input or detecting method by vibration
- **Driving Behavior Detection:** Report harsh braking, harsh acceleration and impact
- **Tamper Alert:** Send tamper alert if the power supply is disconnected
- **Storing Messages:** Store messages if out of cellular coverage
- **Geofence:** It supports circle setting
- **OTA (Over the Air):** Firmware can be remotely upgraded

## 3. Specification

### Physical and Electrical

Dimensions: 90mm\*55mm\*18mm

Weight: 65g

Battery Capacity: 300mAh

Supply Voltage: 6VDC ~ 42VDC

Power Consumption:

-Active Mode: < 40mA @12VDC

-Deep Sleep Mode: < 5mA @12VDC

Operation Temperature: -20°C to 65°C

Storage Temperature: -20°C to 65°C

LTE Module: Quectel BG95

Antenna: Built-in cellular and GPS antenna

LED Indicators: 2 for GPS and cellular

SIM Card: Micro SIM(3FF)

### Comprehensive IOs

Max 4 inputs and 4 outputs

Max 2 A/D inputs and 3 UARTs

### GPS Specifications

Sensitivity Tracking: -157dBm

Position Accuracy (CEP 50): <2.5m(Open Sky)

### Cellular Communication

Cat.M1 & NB2:

#### Cat.M1/LTE-FDD:

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20  
/B25/B26/B27/B28/B66/B85

#### Cat NB2:

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20  
/B25/B28/B66/B71/B85

### Protocol

HTTP/TCP/UDP/SMS/MQTT/DNP3